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CENTRAL INTELLIGENCE AGENCY

REPORT NO.

INFORMATION REPORT

~~CONFIDENTIAL~~

COUNTRY USSR/Hungary/ 25X1A

DATE DISTR 3/ January 51

SUBJECT Chemical and Baking Tests on Soviet and Satellite Grain Samples

NO. OF PAGES 2

PLACE
ACQUIRED [REDACTED] 25X1A

NO. OF ENCLS.
(LISTED BELOW)

DATE ACQUIRED

SUPPLEMENT TO
REPORT NO.

DATE OF I

25X1X

1. Description of samples: 25X1A

No. 1. - A Russian hard wheat, acquired [REDACTED] during 1950 from the cargo of the SS Gudvor VI, loaded at Leningrad, USSR, and discharged [REDACTED] 25X1A

No. 2 - A hard red Hungarian wheat, acquired during 1950 at [REDACTED], 25X1A
[REDACTED] 25X1A

No. 3 - A Russian rye, also from the cargo of the SS Gudvor VI, unloaded
[REDACTED] 25X1A

2. Comparison of flour samples from these grains with a control sample of American "Thatcher" has resulted in the following information:

		No.1	No.2	No.3	<u>Flour Blend</u>		
		<u>Wheat</u>	<u>Wheat</u>		<u>30% Rye 70% Wheat</u>	<u>50% Rye 50% Wheat</u>	<u>100% Wheat</u>
Sample No.	(Thatcher American)						
Glass	Hard Red Spring	Hard Red	Hard Red	Rye			
Test Weight		58.8	61.4	56.6			
Protein of Wheat	12.0	12.1	11.6	11.7			
Water Absorption	65	63	61				
Loaf Volume (cc)	812	741	695		680	585	723
Grain Texture	90 VG	85 VG	85 VG		80 VG	60 F	90 VG
Crumbs Color	80 Cr	70 Cr	70 Cy		65 Cr gr	40 Cr gr	95 Cr

VG: Very Good Cr: Creamy Cy: Creamy-yellow Cr gr: Creamy-gray

3. Conclusions drawn from the above tests and examination of the described samples are as follows:

- a. Samples 1 and 2 appear to be varieties of spring wheat. Their quality is comparable to that grown in the U. S. spring wheat area of North and South Dakota and Montana.

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- 2 -

- b. The loaf volume derived from flour milled from these samples is somewhat lower than that of the "Thatcher" control, but it should be noted that "Thatcher" is one of the better U. S. A. quality varieties. Samples 1 and 2 would be more strictly comparable with such varieties as the U. S. A. "Mida," which is now the leading U. S. A. hard red spring wheat variety.
- c. From the baking result of samples 1 and 2, it appears that the quality of their protein is similar to that of leading American hard red spring wheat varieties. The protein content of a wheat is determined primarily by the environment in which the grain is grown. Adapted varieties grown in the same field differ very little in protein content. They may differ greatly, however, in the quality of the protein.
- d. Sample 3, when blended with 70 per cent of wheat, gave a rather good loaf of rye bread, and the sample blended 50 per cent with 50 per cent gave as good a bread as would normally be expected from a 50-50 blend. In the U. S. A. rye bread seldom contains more than 50 per cent rye. When larger percentages of rye flour are used, the loaves become much heavier and darker.
- e. The crumb color, "creamy", for sample 1 and "creamy-gray" for sample 2, is acceptable by U. S. A. standards, especially since the flours used in these tests had not been bleached. Had the flours been subjected to the usual American bleaching process, the creamy-yellow sample would probably have been considerably improved, and it is estimated that it would be quite acceptable by U. S. A. standards for crumb color.
- f. The creamy-gray crumb color of the rye loaves is quite normal and acceptable for rye breads according to U. S. A. standards.

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